

UNIVERSITY OF MICHIGAN
COLLEGE OF ENGINEERING
THE RADIATION LABORATORY
DEPARTMENT OF ELECTRICAL ENGINEERING
AND COMPUTER SCIENCE



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July 29, 1998

Federal Communications Commission
Equipment Authorization Branch
7435 Oakland Mills Road
Columbia, MD 21046

Attn: Rich Fabina (fax 301-344-2050)

Re: Relating to July 28, 1998 fax
Reference Number: 2237
Certification for HyperLink
RF Wireless Bridg
FCC ID: MYF-HYPER24CLA

Dear Rich,

The following information materials are submitted as requested by above document. I start with a copy of your fax, for item of concern identification purposes which are same as in your fax.

(1) We did the required measurements for the peak emissions in restricted bands. I apologize for not having the data vividly presented in the data tables. The results are presented in a text format Sec. 6.1., which is:

6.1 Peak-to-Average Ratio (15.35(b))

For the measurements presented here for emissions in restricted bands, the DUT was programmed to transmit continuous, and such was verified with spectrum analyzer set to zero-span mode. See Figure 6.1. The average measurements were made using 1 MHz RBW and 100 Hz VBW (sometimes to 300 Hz -- it goes faster). The peak measurements, were made using 1 MHz RBW and 1 MHz VBW.

When a real signal was measured from the DUT, the the worst case ratio was 12.0 dB, and when no signal was detected (a noise floor), the worst case ratio was 14.5 dB.

At the time the report was prepared, there was no room to squeeze in couple more columns in the tables. But , I got it figured out now, and will have the peak data incorporated in the net round.

Sincerely,

Valdis V. Liepa
Research Scientist

cc: HyperLink, Peter Roth



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August 5, 1998

Hyperlink Technologies Inc.
Attn: Peter Roth; Tel: (561) 995-2256 Fax: (561) 995-2432
Tel: (561) 995-2256
Fax: (561) 995-2432
1200 Clint Moore Rd., Suite 14
Boca Raton, FL 33487

Dear Peter:

On August 3, 1998, we performed Line Conducted emission tests on the RF amplifier power supply that you provide and measured that in the worst case it meets the FCC Class B limit by 9 dB. The tests were performed using a section of the radio system that provides same interface and power supply loading as would be in a complete system. The set-up used consisted of:

- (a) Switching Power Supply (DUT)
HyperLink, Model PSA 124
110-220 VAC/ 12 VDC, 4.3 A
S/N: M63103340E1
- (b) DC Power Injector
HyperLink
- (c) 25 ft RG-9/U cable with N connectors
- (d) RF Amplifier
HyperLink, Model: HyperAmp- HyperLink
S/N: 705111
- (e) 50-ohm terminations at the Power Injector RF input port (radio input) and at the amplifier output (antenna port).

The measured conducted emission plots are on the next two pages.

Sincerely,

A handwritten signature in black ink that reads "Valdis V. Liepa".

Valdis V. Liepa
Research Scientist

16:33:23 AUG 03, 1998

REF 80.0 dBµV AT 10 dB PG -10.0 dB

PEAK
LOG
10
dB/

VA SB
SC FFC
CORR

START 0 Hz STOP 2.000 MHz
#RES BW 9.0 kHz VBN 30 kHz SWP 74.1 msec

16:34:24 AUG 03, 1998

REF 80.0 dBµV AT 10 dB PG -10.0 dB

PEAK
LOG
10
dB/

VA SB
SC FFC
CORR

START 0 Hz STOP 30.00 MHz
#RES BW 9.0 kHz VBN 30 kHz SWP 1.11 sec

(Top) Conducted Emissions; High Side, 0-2.0 MHz
(Bottom) Conducted Emissions; High Side, 0-30 MHz.
(LISN 9 kHz Bandwidth Peak Detection)

16:36:01 AUG 08 1998

REF 40.0 dB μ V AT 10 dB PB -10.0 dB

PEAK

LOG

10

dB/ \sqrt

LIMIT FREQS

VA SB
SC FC
COPR

START 0 Hz

#RES BW 9.0 kHz

VBW 30 kHz

STOP 2.000 MHz

SMF 74.1 usec

16:36:01 AUG 08, 1998

REF 80.0 dB μ V AT 10 dB PB -10.0 dB

PEAK

LOG

10

dB/ \sqrt

LIMIT FREQS

VA SB
SC FC
COPR

START 0 Hz

#RES BW 9.0 kHz

VBW 30 kHz

STOP 20.00 MHz

SMF 1.11 sec

(Top) Conducted Emissions; Low Side, 0-2.0 MHz.

(Bottom) Conducted Emissions; Low Side, 0-30 MHz.

(LISN 9 kHz Bandwidth Peak Detection)